

KUKTA, J.M. [Kukta, H.M.]; BONDARENKO, M.G. [Bondaranko, M.H.]

Comparative evaluation of the performance of ensilage harvesters.
Mekh.sil'.hozp. 10 no.7:20-23 J1 '59. (MIRA 12:12)

1. Glavnyy inzhener laboratorii Ukrainskoy mashinostpytatal'noy
stantsii.
(Ensilage) (Harvesting machinery)

Basic conditions for obtaining precise squares in planting. Pech. i
elek.sets.sel'khoz. 17 no.4:26-24 '59. (MIRA 12:11)

1. Ukrainskaya mashinostpytatol'naya stantsiya.
(Planters (Agricultural machinery))

KUKTA, G. M. Cand Tech Sci -- "Study of technological processes of the complex mechanization of cultivation of corn." Kiev, 1960 (Min of Agr UkSSR. Ukrainian Acad of Agr Sci). (KL, 1-61, 194)

-202-

KUKTA, G.M. KITAYTSEVA, Z.P.

Results of testing new machinery for sugar beet growing.
Mekh. i elek. sots. sel'khoz. 19 no.3:55-59 '61 (MIRA 14:6)

(Agricultural machinery --Testing)(Sugar beets)

KUKTA, G.M., kand.tekhn.nauk

Investigating the performance of the feeding mechanism of the
KKKh-3 combine. Mekh.i elek.sots.sel'khoz. 19 no.5:23-25 '61.
(MIRA 14:10)

1. Ukrainskaya mashinospytatel'naya stantsiya.
(Combines (Agricultural machinery))

KUKTA, G.M., kand.tekhn.nauk; BONDARENKO, N.G., inzh.

Methodology for a comparative evaluation of high-precision planters.
Mekh. i elek. sots. sel'khoz. 20 no.1:13-16 '62. (MIRA 15:2)

i. Ukrainskaya mashinoispytatel'naya stantsiya.
(Planters (Agricultural machinery))

KUPTA, G.M., kand. tekhn. nauk; BUDKO, A.I., kand. tekhn. nauk,
retsensent;

[Testing agricultural machinery] Ispytaniia sel'skokho-
ziaistvennykh mashin. Moskva, Mashinostroenie, 1964.
281 p. (MIRA 17:8)

KUKU, Aleks. inzh; ZAKHARIIA, D.

Rationalizers and invention movement in the People's Republic
of Rumania. Ratsionalizatsiia 11 no,10:20-21 '61.

L 1043-66

ACCESSION NR: AP5025949

CZ/0024/65/011/004/0085/0089

AUTHOR: Kukucn, Jan (Engineer)

28
B

TITLE: Abbreviated calculation of moments in the statistical analysis of errors

SOURCE: Geodeticky a kartograficky obzor, v. 11, no. 4, 1965, 85-89

12,44,55

12,44,55

TOPIC TAGS: error statistics, calculation, set theory

ABSTRACT: The article presents a simple method of comparison of a selected set with a normally distributed set and shows that it can give a good result. Orig. art. has: 16 formulas, 1 graph, and 4 tables.

ASSOCIATION: Ustav teorie merania SAV, Bratislava (Institute of the Theory of Measurement, SAV)

4455

SUBMITTED: 00

ENCL: 00

SUB CODE: MA

NR REF SOV: 001

OTHER: 002

JPRS

Card 1/1

AUTHORS: Kyul'ovskiy, Petko, Engineer, S/105/60/000/03/008/023
Kukuchev, Khristo, Engineer B007/B008

TITLE: Determination of the Optimum Dimensions of a Transformer

PERIODICAL: Elektrichestvo, 1960, Nr 3, pp 43-48 (USSR)

ABSTRACT: It is the purpose of the paper under review to show a method for the determination of the optimum dimensions of a transformer which is more convenient for the practice. This method allows to obtain the given no-load current more easily. For determining the optimum transformer dimensions it was started here from the rated power, the losses due to short circuit and no-load, as well as from the short-circuit voltage. Core induction, current density, and no-load current are checked for the dimensions determined from the formulas. The final optimum dimensions are then determined by several consecutive checks. It is not necessary to alter the constants in the equations when checking the no-load current. It is sufficient to assume new dimensions which satisfy simultaneously the assumed no-load and short-circuit losses. With a given

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quality of the electric steel, given losses and no-load current, the specific electromagnetic loads which are necessary for the computation are determined. The following was taken as a basis when deriving all formulas: 1) Transformers with m -phases and a number of cores equal to m are investigated. 2) The coils are concentric, have the same height and an equal number of windings, viz. $w_1 = w_2 = w$ and $U_1 = U_2 = U$ are assumed for the computation. 3) The weight and the price are only related to the active material. Formula (19) is derived first. It is an equation with 3 unknowns, the main dimensions of the transformer. Formulas (21) and (22) are then written down. These contain the same unknowns as formula (19). Formula (21) is the equation for the active component of the short-circuit voltage and formula (22) that for its reactive component. The width of the window F is determined from formula (23), only 2 unknowns remaining then in formula (19). These can be determined by assuming the value of one unknown and determining the other from formula (19).

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Induction, no-load current, and current density are then checked. The lowest price of the active material for a given no-load current and admissible current density forms the criterion for the optimum dimensions. All the formulas given here can also be applied for three-phase and single-phase core-type transformers, as well as for single-phase shell-type transformers. The details to be considered here are indicated. The method given here is illustrated in the appendix by an example. There are 2 figures and 1 reference .

ASSOCIATION: Nauchno-issledovatel'skiy institut mashinostroyeniya i elektropromyshlennosti, Sofiya (Scientific Research Institute for Machine Building and the Electrical Industry, Sofia)

SUBMITTED: September 6, 1959

Card 3/3

KUKUCOVA, Marta

Use of the collection of technical standards in the Slovak
Technical Library. Normalizace 11 no.6:184-185 Je '63.

1. Slovenska technicka kniznica, Bratislava.

TAKACS, L.; KUKUCSKA, J. Technical assistance: ALBERT, Karola; VAJDA, Vera

Effect of chronic anaemia on cardiac output and organ blood
flow in the rat. Acta med. acad. sci. Hung. 20 no.1:71-77 '64

1. Second Department of Medicine, University Medical School,
Budapest.

TAKACS, Lajos, dr.; KALLAY, Kalman, dr.; GOMORI, Pal, dr., technikai munkatársak: VAJDA, V.; KUKUCSKA, J.; ALBERT, K.

Effect of synthetic angiotensin on the redistribution of circulating blood in rats. Orv. hetil. 102 no.48:2272-2275 26 N '61.

1. Budapesti Orvostudományi Egyetem, II Belklinika.

(BLOOD CIRCULATION pharmacol)
(HYPERTENSIN pharmacol)

SUMMARY

SOMOGYI, György, Dr. TOTH, Bela, Dr; technical workers: KUKUCSKA, Janos, SARKADI, Janosne (Mrs); Medical University of Budapest, II. Medical Clinic (Budapesti Orvostudományi Egyetem, II. Belklinika) and Vaci Ave Hepatitis Hospital (Vaci-uti Hepatitis Kórház).

"Determination of Liver Perfusion with Colloidal Gold Isotope."

Budapest, Orvosi Hetilap, Vol 104, No 15, 14 Apr 63, pages 687-689.

Abstract: [Authors' Hungarian summary] The liver perfusion determination with colloidal Au¹⁹⁹ is a valuable addition to the current experimental techniques. The test is easy on the patient, can be carried out repeatedly and the degree of the liver circulation can be checked frequently. In the course of the experiments the minimal liver circulation value in normal individuals was 660-1130 ml/min/m², in patients with chronic hepatitis and cirrhosis it was 300-880 and 218-650 ml/min/m² respectively. The test is considered to be of prognostic value and is also useful for the determination of the effectiveness of the treatment. 9 Western references.

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TAKÁCS, Lajos, dr.; GOMORI, Pal, dr. Technikai munkatársak: ALBERT, Karola; KUKUCSKA, Janos; VAJDA, Vera

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927320001-

blood in rats. Orv. hetil. 105 no.16:737-738; 19 Apr '64

1. Budapesti Orvostudományi Egyetem, II. Belklinika.

*

KUKUCZKA, Antoni, mgr inz.

Causes of fire and fire-fighting action in the B mine.
Wlad gorn 14 no.10:323-325 0 '63.

KUKUCZKA, Antoni, mgr inz.

Way of drawing space schemes of ventilating mining headings Pt. 2.
Wiadom gorn 14 no.5:149-153 My '63.

KUKUCZKA, Antoni, mgr inz.

Better efficiency of a ventilation pipe through the application of adjusted pipe fittings for the air flow at the end of the ventilation conductor. Wiadom gorn 14 no. 7/8:241-242 J1-Ag '63.

KUKUCZKA, Antoni, mgr inż.

Conclusions drawn from studies on accidents caused by staying
in a hazardous gas atmosphere (CO₂) in collieries. Pt. 2.
Wiadom gorn 15 no. 6:204-206 Je '64.

KUKUCZKA, Antoni, mgr inz. .

Combat against accidents caused by the presence of carbon
dioxide in mine headings. Pt. 1. Wiadom gorn 15 no. 4:
134-137 Ap '64.

KUKUCZKA, Antoni, mgr. inż.

Methods of detecting disturbances in the ventilation network
of a mine. Wiadom gorn 15 no.2:48-54 R'64

KUKUCZKA, Antoni, mgr inz.

Liquidation of fire fields through recirculation of
neutralized fire hazard gases. Wiadom gorn 15 no.5:
171-173 My'64.

KUKUCZKA, Antoni, mgr inż.

Use of neutralized fire gases for accelerated liquidation
of fire areas. Przegl gorn 20 no.9:428-431 S '64.

KUKUCZKA, Antoni, mgr. inż.

Selection of a series of main mine fans to meet the conditions
in Polish mines. Przegl. gorn 20 no.11:558-562 N '64.

KUKUCZKA, Antoni, mgr inz.

Ventilation of underground explosive storages. Wiadom gorn
15 no.11:360-366 N '64.

TAKACS, Lajos, dr.; Technikai munkatársak: VAJDA, V.; KUKUCSKA, J.; ALBERT, K.

Effect of hemorrhage on the blood circulation in the organs
of rats following removal of the kidneys. Orv. hetil. 106 no.36:
1692-1694 5 8'65.

1. Budapesti Orvostudományi Egyetem, II. Belklinika (igazgató:
Gomori, Pál, dr.).

KUKUDZHANOV, N. I.

Kukudzhanov, N. I. "The method of restoring traumatic breaks and the ensuing obliteration of deep rear sections of the urethra," Trudy III Zakavkazsk. s"yzda khirurgov, Yerevan, 1948 (on cover: 1949), p. 408-417

SO: U-5240, 17 Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

KUKUDZHANOV, N. I.

Surgical therapy in primary inguinal hernia Sverdlovsk, Medgiz, 1949. 182 p.

DAFM

L. Hernia - Surgery.

APR 19 1965

Publication of lectures of the Institute: part 10 of the
vestibula. Kaluzhskaya 40 no. 92-10-123 3 1/4 (1962)

La prima di un'esperienza di lavoro, "Fino a"

AUTHORS: Darevskiy, V. M., Kukudzhanov, S. N. SOV/20-123-1-12/56

TITLE: The Stability of an Orthotropic Cylindrical Shell Subjected to Torsion With Internal Pressure (Ustoychivost' ortotropnoy tsilindricheskoy obolochki pri kruchenii s vnutrennim davleniyem)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1, pp 49-52 (USSR)

ABSTRACT: The present paper solves the problem of the above mentioned stability in the case of torsion with sufficient internal pressure. This shell is assumed to have an "average" length, which term is defined. The edges of the shell are assumed to be fastened in a hinge-like manner or to be embedded. The here discussed results are a generalization of the corresponding results derived in a previous paper by V. M. Darevskiy (Refs 1,2) for an isotropic shell. As initial equations, the equations for the equilibrium of the shell in consideration of their deformation and the usual relations between the internal force factors (silovoy faktor) and the deformations expressed by the displacements are used. If axial-, radial-, and shear stress

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Shell Subjected to Tension With Internal Pressure

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T_2^0 , and S respectively do not depend on the dimensionless coordinates ξ and η , the additional displacements can be ascertained in a previously mentioned form (Ref 1). A rather voluminous equation for the additional displacement w in a radial direction is written down. In the case of a simultaneous action of the torsional moments M_* and the (internal or external) pressure q , the problem of the stability of the shell may be raised as in the previous paper by V. M. Darevskiy (Ref 1). In that case the problem is reduced to determining the critical value λ_{crit} (of the smallest eigenvalue) of the positive parameter λ in the case of a simple stress brought to bear upon the shell by the moments $M = \lambda M_*$ and by the pressure $q = \lambda q_*$. If it is known how to determine λ_{crit} , critical stress can be determined also if pressure remains constant during stress and if only the moments vary. A formula is derived for the eigenvalue λ and the corresponding computations

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are followed step by step. The formulae derived here apply only if they lead to critical stresses that are lower than the flow limit. The solution found in the present paper satisfies all boundary conditions of the given problem. There are 2 Soviet references.

PRESENTED: June 12, 1958, by Mr. E. Rabotnov, Academician

SUBMITTED: June 11, 1958

Card 3/3

Kukudzhinov, S.N.

14(10)

PHASE I BOOK EXPLOITATION

SOV/2276

Prochnost' tsilindricheskikh obolochek; sbornik statey (Strength of Cylindrical Shells; Collection of Articles) Moscow, Oborongiz, 1959. 157 p. Errata slip inserted. 2,400 copies printed.

Ed. (Title page): V.M. Darevskiy, Doctor of Physical and Mathematical Sciences; Ed.: S.I. Bumshteyn, Engineer; Ed. of Publishing House: A.P. Starykh; Tech. Ed.: V.I. Oreshkina; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for aircraft jet-engine designers and production engineers.

COVERAGE: This collection of nine articles covers problems of statics and dynamics of cylindrical shells which arise in the calculation of stability of jet-engine cases. Results of new theoretical and experimental investigations are included. No personalities are mentioned. References follow some of the articles.

TABLE OF CONTENTS:

Foreword

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Strength of Cylindrical Shells (Cont.)

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Zakharova, A.P. Calculation of a Circular Cylindrical Cantilever Shell Loaded at the Free End by Uniformly Distributed Transverse Forces

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The above problem is representative of jet-engine cases subject to stresses and deformations due to forces of inertia of the rotor in nonlinear flights. In the general case the safety coefficient and the clearance must be determined. The article is primarily concerned with stresses and deformations.

Zakharova, A.P. Flexure of a Cylindrical Cantilever Shell Reinforced With a Rigid Radially Loaded Ring

43

The cylinder is reinforced with a rigid ring at its free end. The force is applied along one of the diameters of the ring. The problem is similar to the problem described in the first article and was treated analogously. Displacements due to flexure differ but little from displacements determined in the first article, and the category of the displacement is nearly momentless.

Kashnyakin, R.I. Influence of an Axial Tensile Force on the Stability of Cylindrical Shells Subject to Flexure and Normal External Normal Pressure

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Strength of Cylindrical Shells (Cont.)

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According to the author the simultaneous action of an axial tensile stress and external pressure has not been thoroughly analyzed. He considers a thin, circular, closed shell under torsion. Other loads produce a momentless stressed state. The expressions of stresses and deformations are given.

Darevskiy, V.M. Stability of Circular Cylindrical Shells Under Flexure by a Transverse Force Combined With Torsion and Internal Pressure

72

In this article, the results of the author's former work are used to simplify the evaluation of the stability of cylindrical shells under the simultaneous action of torsional moments, internal pressure and transverse rim forces. The author describes conditions under which the evaluation of the stability of the shell may be determined by simple formulas. The above analysis is applicable to the calculation of combustion chambers of jet engines.

Darevskiy, V.M., and S.N. Kukudzhanov. Stability of Orthotropic Shells Under Torsion and Normal Pressure

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Strength of Cylindrical Shells (Cont.)

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The authors establish basic equations for the determination of stresses, moments and deformations, and then analyze separately cases of the uniform transverse compression, torsion, and torsion with pressure. The established formulas are valid only within the limits of elastic deformations.

Kukudzhanov, S.N. Stability of an Orthotropic Cylindrical Shell Under External Transverse Pressure With Axial Tension and Torsion With Axial Tension 109

In this article, results obtained for an isotropic shell by R.I. Kshnyakin are generalized for orthotropic shells. In order to establish final formulas, the author considers the stability of cylindrical orthotropic shells under outer transverse pressure with axial tension, and the stability of cylindrical orthotropic shells under torsion with axial tension.

Serdyukov, V.V. Stability of Anisotropic Cylindrical Shells Under Certain Loads 118

The author considers the stability of anisotropic cylindrical shells under the action of outer pressure, torsion and simultaneous action of torsion and normal pressure. Stability is studied on the basis of more complete equations than those estab-

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Strength of Cylindrical Shells (Cont.)

SOV/2276

published by Kh.M. Mushtar. in his theory of thin shells (1938). The established formulas provide a method for determining critical stresses under simultaneous torsion and normal pressure.

Nikulin, M.V. Influence of Axial Stresses on the Frequency of Natural Vibrations of Cylindrical Shells 131

The author is concerned with natural vibrations of near-cylindrical shells, due to the dynamic action of an unbalanced rotor or to gas-dynamic impulses. In both cases the determination of natural vibrations of the system is important. The influence of axial stresses on the vibration frequency is considered, generally speaking, as independent of pressure. Formulas and graphical representations are given.

Nikulin, M.V. Natural Vibrations of Cylindrical Shells Prestressed by Torsional Moments 146

This article is a continuation of the preceding article. The author reduces three differential equations of vibration to one differential equation of radial displacement. Thus an

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Strength of Cylindrical Shells (Cont.)

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algebraic equation of the third order is obtained for determining of the square of the frequency without solving the third order. The boundary conditions are considered in detail.

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24.4100

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 4, p. 119, # 5042

AUTHORS: Darevskiy, V.M., Kukudzhinov, S.N.

TITLE: The Stability of a Cylindric Orthotropic Shell²⁶ in Case of Torsion²⁶ and Normal Pressure

PERIODICAL: V sb.: Prochnost' tsilindr. obolochek, Moscow, Oborongiz, 1959, pp. 95-108

TEXT: The authors consider the stability of an elastic orthotropic cylindric shell loaded by torque M and normal pressure q. The investigation is performed analogously to the investigations of an isotropic shell considered by V.M. Darevskiy (Izv. AN SSSR, Otd. tekhn. n., 1957, No. 11, pp. 137-147 - RZhMekh, 1958, No. 9, 10, 285). It is assumed that the shell satisfies the conditions

$$\sqrt{\frac{E_2}{E_1}} \xi^{1/2} \ll \left(\frac{\pi R}{1} \right)^2 \ll \sqrt{\frac{E_2}{E_1}} \xi^{-1/2} \quad \left(\xi = \frac{h^2}{12 R^2 (1 - \nu_1 \nu_2)} \right)$$

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$$\sqrt{\frac{E_1}{E_2}} \epsilon^{1/2} \ll \left(\frac{\pi R}{l} \right)^2 \ll \sqrt{\frac{E_1}{E_2}} \epsilon^{-1/2}$$

Here, h , R , and l are the thickness, radius, and length of the shell, respectively, E_1 , E_2 , ν_1 and ν_2 are elastic moduli and Poisson coefficients in axial and peripheral directions, respectively ($E_1 \nu_1 = E_2 \nu_2$). Further such shells and such loading cases are considered, in which the critical value of the load parameter λ is defined by: 1) either the number n , a few times larger than the unity; 2) or numbers μ_1 , also a few times larger than the unity (where n is the number of waves in the peripheral direction, $\mu_2 - \mu_1 = 2\pi mR/l$, $m = 1, 2, \dots$), 3) or the number n , equal to zero or 1. It is assumed that the shell edges are hinged or stiffly restrained. Based on the conventional assumptions of the elasticity theory, a system of linearized equations of the equilibrium of the orthotropic cylindric shell is obtained; the equations are simplified further on the assumption that the shell represents a membrane. This system is reduced to one linear differential equation with partial derivatives of the eighth order for the additional radial displacement. It was assumed at deriving the equations

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that, in addition to the torsion and the normal pressure, the shell is loaded by an axial compressive force P which does not appear in the further consideration. The expression for the critical stress is obtained for one transversal compression acting uniformly, whereat the flexure in radial direction is prescribed in the form:

$$w = C \cos \mu \xi \sin n \varphi \left(\mu = \frac{m \pi R}{1}, \xi = \frac{x}{R}, \varphi = \frac{s}{R} \right) \\ (m = 1, 3, \dots).$$

Here, ξ, φ are coordinates in axial and peripheral directions, C is an arbitrary constant. Hereat it turns out that the complete system of boundary conditions will be satisfied. The radial flexure is represented in case of pure torsion in the form:

$$w = \sum_{i=1}^2 C_i \sin (\mu_i \xi - n \varphi).$$

Hereat, only one of the boundary conditions is satisfied, that is $w = 0$ at the shell edges. The expressions for the critical stress and the critical value of

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n_* were obtained. Further, the case of simultaneous action of torsion and normal pressure is considered; hereat, the critical value of the load parameter λ for arbitrary values of M and q may be obtained graphically by plotting the correlation $\dot{\gamma} = \lambda - f(\mu)$ in the upper semiplane for various integral positive values of n and by inserting the horizontal chords of the length $2m\pi R/l$ ($m = 1, 2, \dots$) into these graphs. The ordinate of the lowest of these chords yields the value of λ_* . In case that the pressure is internal and sufficiently large in comparison with the value of the torque, approximate expressions for the critical value of the load parameters λ_* and M_* were found, whereat the pressure is assumed to be constant during the loading process. It is assumed that the equality

$$G = \frac{1}{4(1 - \nu_1 \nu_2)} (2\sqrt{E_1 E_2} - \nu_1 E_1 - \nu_2 E_2) \quad (*)$$

takes place, where G is the modulus of rigidity; this equality is a generalization of the known correlation between the modulus of rigidity and the modulus of elasticity for the isotropic shell. The case is considered, when the equality (*)

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The Stability of a Cylindric Orthotropic Shell in Case of Torsion and Normal Pressure

is not satisfied and the internal pressure is not very high; in this case, a simplified expression for λ_* was obtained.

P.I. Zheludev

Translator's note: This is the full translation of the original Russian abstract.

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KUKUDZHANOV, S.N. (Tbilisi)

Stability of a cylindrical shell subjected to the action of
torques varying linearly along the length of the shell. Izv.
AN SSSR. Otd. tekhn. nauk Mekh. i mashinostr. no. 1:180-182 Ja-F
'61. (MIRA 14:2)

1. Institut matematiki AN GruzSSR.
(Elastic plates and shells)

KUKUDZHANOV, S.N.

Stability of a cylindrical shell under the action of torsional moments evenly distributed over its surface. Soob. AN Gruz. SSR. Soob. AN Gruz. SSR 26 no.4:389-395 Apr '61. (MIRA 14:8)

1. Akademiya nauk Gruzinskoy SSR, Tbilisskiy matematicheskiy institut imeni A.M. Ilyumadze. Predstavleno chlenom-korrespondentom AN GruzSSR O.L. Oniaishvili.
(Elastic plates and shells)

I 10630-65 EWT(d)/EWT(m)/EWP(k)/EWA(n)/EWP(w)/EWA(d) Pt-4/Feb AFIC(p)/
ASD(f)-2

ACCESSION NR: APL043527

S/0250,64/004/003/0533/0538

AUTHOR: Kukudzhinov, S. N. (Tiflis)

TITLE: Stability of a cylindrical shell under action of variable pressure B

SOURCE: Inzhenernyy zhurnal, v. 4, no. 3, 1964, 533-538

TOPIC TAGS: cylindrical shell, shell stability, sinusoidal loading, buckling pressure, cylindrical shell stability, shell buckling, cylindrical shell buckling, axisymmetric pressure

ABSTRACT: The stability of a cylindrical shell under the action of variable axisymmetric pressure was studied. External loading conditions consisting of uniform and cyclically variant loads acting upon certain portions of the cylinder were considered. The shell is assumed to be in a membrane state of stress before buckling, and also assumed to be simply supported at both ends. The differential stability equation for a cylindrical shell under variable hoop stresses is solved by the Bubnov-Galerkin method resulting in an infinite system of homogeneous algebraic equations. Several cases are discussed and developed: 1) uniform pressure, 2) external sinusoidal pressure distributed over the whole shell length.

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3) a combination of uniform and sinusoidal external pressures, 4) external sinusoidal pressure over one half and internal sinusoidal pressure on the other half, and 5) sinusoidal pressure on a part of the whole length. In each case the critical pressure is determined and compared with that of the other cases considered. The hazards encountered with certain kinds of nonuniform pressure and pressure distribution are discussed. Orig. art. has: 16 equations.

ASSOCIATION: none

SUBMITTED: 20Jan64

SUB CODE: ME

NO REF SOV: 003

ENCL: 00

OTHER: 002

Card 2/2

L 8639-55 EWT(d)/EWT(m)/EWP(k)/EWA(h)/EWA(d)/EWP(u) Pf-h/Peb AFTG(p)/ASD(f)-2
EM

ACCESSION NR: AP4042888

8/0251/64/025/001/0037/0044

AUTHOR: Kukudzhinov, S. N.

TITLE: Stability of a cylindrical shell under the simultaneous influence of torsion and variable pressure

SOURCE: AN GruzSSR, Soobshchenty, v. 35, no. 1, 1964, 27-44

TOPIC TAGS: shell, cylindrical shell, shell stability, torsion variable pressure, hinged shell, Bubnov Galerkin method, critical torsion moment

ABSTRACT: The author considers the stability of a cylindrical shell under the simultaneous influence of torsion moments M applied to the edges of the shell and an external, linearly changing, axisymmetric pressure q applied either to the whole lateral surface or to a part thereof. This problem is solved in the article by a successive approximation technique described previously (S. N. Kukudzhinov, Trudy IV Vsesoyuznoy konfer. po teorii pl. i oboloch. Yerevan, 1962) and applied to the Bubnov-Galerkin method. Assuming that the loss of stability is nearly sinusoidal and that the shell is fixed by hinges along one side, equations are developed for shell stability in relation to radial displacements and the effect

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ACCESSION NR: AP4042888

of external pressure. On the basis of the final equations developed:

$$(i_e)_{cr} = \left[\frac{2}{8} D_{1n_1} \left(D_{2(n_1+1)} - \frac{(x_1^2 + 1)}{2 D_{1(n_1+1)}} \right) \right]^{1/2} \quad (1)$$

$$(i_e)_{cr} = \frac{(i_e)_{cr}}{\left[1 + \frac{D_{1n_1}}{D_{1(n_1+2)}} + 1.08 \left(\frac{D_{1n_1}}{D_{3(n_1+2)}} + \frac{D_{1n_1}}{D_{3n_1}} \right) \right]^{1/2}} \quad (2)$$

curves are drawn relating the critical torsion moment to pressure. When the results were compared with those of V. M. Larevsky (Izvestiya AN SSSR, No. 1, 1957), good agreement was noted for values of q between 0 and $1/2$ of q_{crit} , as well as close to q_{crit} . Orig. art. has: 6 figures and 20 numbered formulas.

Card 2/3

L 8639-65

ACCESSION NR: AP4042388

ASSOCIATION: Tbilisskiy matematicheskiy institut im. A. M. Razmadze, Akademiya nauk
Gruzinskoy SSR (Tiflis Institute of Mathematics, Academy of Sciences of the Georgian SSR)

SUBMITTED: 03Mar64

ENCL: 00

SUB CODE: AS, ME

NO REF SOV: 003

OTHER: 001

Card 3/3

Cond.
KUKUDZHANOV, V. N.: Master Phys-Math Sci (diss) -- "Stress waves in elastic-viscous-plastic and viscous-plastic media". Moscow, 1958. 5 pp (Min Higher Educ, Moscow Physicotechnical Inst), 170 copies (KL, No 2, 1959, 117)

KUKUDZHANOV, V. N.,

"Perpendicular Impact on a Plate by a Rotating Cylinder," Research in Physics and Radio Engineering, Moscow, Oborongiz, 1958. p. 115.

The book is a collection of 13 articles written by instructors and graduate and under graduate students of the Moscow Inst. of Physics and Technology. The articles discuss problems in radio physics, optics and physics

KUKUDZHANOV, V. N.

Elastic and plastic bending of thin-walled rods with tangential stresses taken into account. Trudy MTI no.1:97-114 ' 58.

(MIRA 12:1)

(Elastic rods and wires)

KUKUDZHANOV, V.N., aspirant

Propagation of spherical waves in elastic viscous plastic media.
Izv.vys.ucheb.sav.; mashinostr. no.2:14-20 '58. (MIRA 11:12)

1. Moskovskiy fiziko-tekhnicheskii institut.
(Elastic waves)

KUKUDZHANOV, V.N.

Transverse impact of a rotating cylinder on a plate. Trudy MFTI no.2:
115-122 ' 58. (MIRA 11:12)
(Elastic plates and shells)

10(1)

AUTHOR:

Kukudzhanov, V.N.

SOV/22-11-6-5/10

TITLE:

Shock Waves in a Compressing Viscous-Plastic Medium (Udarnyye volny v uplotnyayushcheysya vyazko-plasticheskoy srede)

PERIODICAL:

Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh, Nauk, 1958, Vol 11, Nr 6, pp 3-14 (USSR)

ABSTRACT:

In the undeformed initial state the medium is assumed to have the density ρ_0 and to be incompressible up to the pressure P_s . For P_s the density is assumed to jump from ρ_0 to ρ_1 and then to remain constant, whereby the medium is incompressible again and obeys the laws of the viscous-plastic flow. Let the deformation of the volume be reversible only for $0 < P < P_s$. For $P > P_s$ it is assumed to form permanent deformations. In the medium with the described properties the author considers the propagation of a shock wave which arises by the explosion in a spherical or cylindrical volume of the radius a_0 . Let the initial pressure P_0 be $\gg P_s$. Applying the results of A.A. Il'yushin the author obtains the equation

Card 1/3

Shock Waves in a Compressing Viscous-Plastic Medium SOV/22-11-6-5/10

$$\frac{a}{2} \ln \alpha \frac{dx}{da} = \left[\frac{g_0}{g_1 - g_0} \alpha^2 + \frac{1}{2} (\alpha^2 - 1) - \ln \alpha \right] x - P(a) + 1 - m \ln \alpha -$$

$$- \frac{\nu}{2a} (\alpha^2 - 1) \sqrt{x}, \quad x = \left(\frac{da}{dt} \right)^2, \quad \alpha = \frac{a}{R},$$

where a is the radius of the cavity, R the radius of the shock

wave (it is $R^3 = \frac{g_1 a^3 - g_0 a_0^3}{g_1 - g_0}$), $\alpha = \frac{a}{R}$, $m = \frac{2}{\sqrt{3}}$. The equation

holds for cylindrical symmetry and generalizes a result of A.Yu. Ishlinskiy [Ref 1]. A similar longer equation is given for the case of spherical symmetry. The equations are investigated numerically and under neglect of a_0^3 also analytically (approximately). The results (the integral curves are similar to hyperbola) are graphically represented.

Card 2/3

Shock Waves in a Compressing Viscous-Plastic Medium SOV/22-11-6-5/10

There are 2 figures, and 5 Soviet references.

ASSOCIATION: Moskovskiy fiziko-tehnicheskii institut (Moscow Physico-Technical Institute)

SUBMITTED: June 6, 1958

Card 3/3

KUKUDZHANOV, V.N.

Propagation of cylindrical shock waves of stresses in a plate
beyond the yield point. Trudy MFTI no.3:108-120 '59.
(MIRA 13:5)

(Shock waves)

K. K. AND Z. HANOV, V. N.

Report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

136. A. A. Dymnikov (Moscow): Problems of the theory of plasticity under combined loading.
137. I. K. Kabanov (Frankfurt): Elastic-plastic vibrations of rods of non-circular cross section.
138. V. I. Kalinin (Leningrad): The forced nonlinear flexural vibrations of a homogeneous prismatic rod and a very long rectangular plate.
139. A. B. Kabanov (Moscow): On a method of solving the equations of motion of a viscoelastic anisotropic medium in the presence of a magnetic field.
140. A. A. Kabanov (Moscow): An engineering method for the analysis of the plasticity of a prismatic shell.
141. I. K. Kabanov (Leningrad): The distribution of vertical compressive stresses in a shell of a homogeneous anisotropic or stratified solid.
142. A. A. Kabanov (Moscow): Loading of multilayer plates of variable stiffness.
143. I. K. Kabanov (Leningrad): The effect of aging and anisotropy on the stress-strain behavior of a shell.
144. A. A. Kabanov (Leningrad): On the time of rupture in creep.
145. A. A. Kabanov (Leningrad): On some variational principles and methods in the theory of plasticity.
146. A. A. Kabanov (Moscow): A procedure of determining an impact loading diagram for large deformations.
147. A. A. Kabanov (Moscow): Some questions of the formulation of elastostatic and elastoplastic contact problems and methods for their solution.
148. A. A. Kabanov (Moscow): The role of a viscoplastic medium in a shell.
149. A. A. Kabanov (Leningrad): On the elastic equilibrium of shells of anisotropic plates.
150. A. A. Kabanov (Moscow): Models of the influence of surface forces on the stability of the bending moment in thin plates and shells.
151. A. A. Kabanov (Moscow): Failure shells of vibration of multilayered shells in a two-dimensional temperature field.
152. A. A. Kabanov (Moscow): Dynamic stability of cylindrical and spherical shells.
153. A. A. Kabanov (Moscow): The influence of initial imperfections on the stability of shells of anisotropic plates and shells under axial compression.
154. A. A. Kabanov (Moscow): Elastic stability and post-buckling behavior.
155. A. A. Kabanov (Moscow): The effect of surface forces on the effect of support elasticity on the lateral vibrations of rods.
156. I. K. Kabanov, I. A. Gilling (Moscow): Strength and plasticity of "sandwich" shells.
157. A. A. Kabanov (Moscow): The design of flexible plates and beams on elastic foundations.
158. A. A. Kabanov (Moscow): Loading of rectangular shallow shells with elastic ribs.
159. A. A. Kabanov (Moscow): On the solution of the nonlinear algebraic equations of shell theory.
160. V. I. Kalinin, B. M. Kabanov (Leningrad): The non-dimensional problem of the construction of a solution of the problem of the forced vibrations of a shell with variable specific weight and variable shear properties.
161. A. A. Kabanov (Moscow): The elastic equilibrium of anisotropic plates with a finite number of elastic layers.
162. A. A. Kabanov (Leningrad): The stability of cylindrical shells of anisotropic plates.
163. A. A. Kabanov (Moscow): Lateral stability of coupled rods and shells.
164. A. A. Kabanov (Leningrad): On the theory of plane plasticity.
165. A. A. Kabanov (Moscow): Propagation of plastic waves in a shell.
166. A. A. Kabanov (Moscow): The investigation of contact problems in the theory of elasticity by the method of singular integral equations.
167. A. A. Kabanov (Moscow): The investigation of the deformation of shells on models by the Eyring method.
168. A. A. Kabanov (Moscow): Application of the non-linear variational principles to some problems of the theory of elastic-plastic strains.
169. A. A. Kabanov (Moscow): The investigation of rheological properties of plastic solutions.

11, 2313

S/179/60/000/04/008/027
E081/E141

AUTHORS: Kukudzhanov, V.N., and Nikitin, L.V. (Moscow)

TITLE: Propagation of Waves in a Rod of Heterogeneous
Elasto-visco-plastic Material

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Mekhanika i mashinostroyeniye, 1960, No 4, pp 53-59

TEXT: The rod is assumed semi-infinite in length and of constant cross section S . The origin of coordinates is at one end of the rod and the positive x direction is along the rod. The stress σ is positive when tensile; positive displacement u corresponds to increasing x ; the density of the material is ρ . The differential equation of motion of the rod is then:

$$\frac{\partial \sigma}{\partial x} = \rho \frac{\partial^2 u}{\partial t^2} \quad (1.1)$$

The propagation of waves arising from shock loading is considered, corresponding to rapid changes in the stress and deformation states in the rod. It is known that Young's modulus and Poisson's ratio are practically independent of deformation velocity, whereas the flow limit σ_s is appreciably affected. The flow law is written
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S/179/60/000/m/008/027
E081/E141

Propagation of Waves in a Rod of Heterogeneous Elasto-visco-plastic Material

in the form of Eq (1.2) subject to the conditions at the foot of page 53, where E is Young's modulus, k is a constant of the material ($k \approx 10^{-6} \text{ sec}^{-1}$ for metals), and $\sigma = f(\epsilon, x)$ is the static relation between stress and strain at the section x of the heterogeneous material. Changing to dimensionless parameters given by Eq (1.4), the wave equation (1.6) is obtained if the stress does not exceed the yield point $\sigma_s(x)$, whereas if $\sigma > \sigma_s(x)$ the telegraph equation (1.8) is obtained, where α and β are given by Eq (1.7). (In equation (1.5) and subsequent equations, the dimensionless parameters in Eq (1.4) are written without the bar). If an instantaneous disturbance is applied to the end $x = 0$ of the rod, application of the Laplace transform and the condition (1.12) leads to Eq (2.1) of which the solution is Eq (2.2), where $C(p)$ is an arbitrary function of the complex variable p , and T_0 is the representation of the function T . Expressing T_0 as the series (2.3) and inverting, T is finally obtained as (2.12). Fig 1 shows the lines of equal stress in the (x, t) plane for $v_0 = 2$, $m = 0.1$ (v_0 is defined after Eq (2.14) and $m = \rho c S / k M$ Card 2/3

S/179/60/000/04/008/027
E081/E141

Propagation of Waves in a Rod of Heterogeneous Elasto-visco-plastic Material

where c is the velocity of elastic waves in the medium and M is the mass of the body producing the impact). Finally, a brief discussion is given of the conditions existing in the rod, when the shock loading exceeds the yield point σ_s , with special reference to the determination of the boundary between the plastic and elastic regions. It is concluded that although disturbances exceeding σ_s in magnitude extend to infinity in a semi-infinite elasto-visco-plastic rod, and tend asymptotically to σ_s , this tendency is so rapid that the zone containing strains of practical importance is quite limited and is concentrated in the immediate neighbourhood of the end of the rod.

There are 2 figures and 5 references: 4 Soviet and 1 English.

SUBMITTED: April 11, 1960

Card 3/3

KUKUDZHANOV, V.N., kand.fiziko-matematicheskikh nauk

Plastic flow of a plane specimen weakened by circular cut-out
holes and subjected to stretching. Trudy MFTI no.7:64-70 '61.
(MIRA 15:4)

(Plasticity) (Deformations (Mechanics))

L 15777-63

ENT(1)/BDS AFFTC/ASD

ACCESSION NR: AP3006347

9/0258/63/003/003/0472/0481

AUTHOR: Kukudzhanov, V. N. (Moscow)

TITLE: Propagation of spherical waves²¹ in a viscoelastic medium

SOURCE: Inzhenernyy zhurnal, v. 5, no. 3, 1963, 472-481

TOPIC TAGS: wave propagation, spherical wave, linear viscoelastic solid, spherical wave propagation

ABSTRACT: Investigation has been made of the propagation of spherical waves in an infinite linear viscoelastic solid having a spherical cavity on whose boundary a time-dependent uniform impulsive pressure (or velocity) is applied. A differential equation of motion connecting the pressure (or velocity) function and displacements, and integrodifferential equations describing the stress-strain relations in a kind of Maxwell solid are utilized to obtain an expression for the radial displacement in an integral representation by applying the Laplace transform method. An asymptotic solution is obtained by the saddle-point method for the time intervals $t \gg \tau$ (τ is the time of relaxation of the viscoelastic material); the character of propagation and attenuation of the wave consisting

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L 15777-63

ACCESSION NR: AP3006347

of two parts (a front part, which advances at the rate of an elastic spherical wave, and the basic part of the impulse, which advances at a lower rate) is discussed. For $t \ll \tau$, an asymptotic solution is also obtained (thus covering the whole practical range of t values) by applying an expansion in powers of a small time parameter. The solution for the spherical-wave front is derived in a closed form and the procedure for obtaining the solution for the vicinity of the wave front is indicated. Orig. art. has: 5 figures, and 43 formulas.

ASSOCIATION: Institut mekhaniki AN SSSR (Institute of Mechanics, AN SSSR)

SUBMITTED: 08Apr62

DATE ACQ: 27Sep63

ENCL: 00

SUB CODE: AP

NO REF SOV: 001

OTHER: 005

Card 2/2

KUKULA, F.

"Aerosols" by K.Spurny, C.Jech, B.Sedlacek and O.Storch. Reviewed
by F.Kukula. Jaderna energie 9 no.1:36 Ja '63.

KUKULA, Frantisek; SLUNECKO, Jaroslav; KRIVANEK, Miloslav

Determination of some trace impurities in zonal melted
bismuth and tin. Jaderna energie 10 no.1:20 Ja'64.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Rez.

SIMKOVA, Marcela; KUKULA, Frantisek; STEJSKAL, Rudolf

Determining iron in antimony by activation analysis. Jaderna energie 9 no.5:165 My '63.

1. Ustav jaderného výzkumu, Československá akademie věd, Řez u Prahy.

KUKULA, Frantisek; SLUNECKO, Jaroslav; SIMKOVA, Marcela

Copper determination in aluminum. Jaderna energie 9 no.5:166
My '63.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Rez
u Prahy

SIMKOVA, Marcela; KUKULA, Frantisek; SLINECKO, Jaroslav

Determining iodine in organic polymers by activation analysis.
Jaderna energie 10 no.12:445-446 D '64.

1. Institute of Nuclear Research of the Czechoslovak Academy
of Sciences, Rez.

SIMKOVA, Marcela, prom. chem.; KUKULA, Frantisek, inz.; SLUNECKO, Jaroslav, inz.

Iodine determination in organic polymers by activation analysis.
Chem zvesti 19 no.2:115-119 '65.

1. Institute of Nuclear Research of the Czechoslovak Academy of
Sciences, Rez near Prague.

L 7042-66 EPF(c)/EPF(n)-2/EWP(1)/EWA(h)/EWA(1) GG/RM

ACC NR: AP6001101

SOURCE CODE: CZ/0043/65/000/002/0115/0119

AUTHOR: ^{44,55}Simkova, M.--^{44,55}Shimkova, M. (Graduate chemist); ^{44,55}Kukula, F. (Engr.); ^{44,55}Slunacko, J.--^{44,55}Slunechko, Ya. (Engineer)

ORG: ^{44,55}Institute of Nuclear Research, Czechoslovak Academy of Sciences, Rez near ⁶²Prague. (Ustav jaderného výzkumu Československé akademie věd) ^B

TITLE: Determination of iodine in organic polymers by activation analysis ^{44,55}

SOURCE: Chemické zvesti, no. 2, 1965, 115-119

TOPIC TAGS: iodine, polymer, analytic chemistry, gamma ray, radiation chemistry, radioisotope, irradiation

ABSTRACT: Nondestructive activation analysis method perfected by the authors is described. Gamma activity of I128 is measured. The test samples weighed 0.2 - 0.5 g, and were placed together with KI in polyethylene cartridges, and were irradiated for 20 minutes by a neutron flow. I128 was identified by its gamma-energy, and by the 19 half-life period determined from photopeaks. Amounts of I of 0.0001 g can be determined. Orig. art. has: 2 figures, 1 table. [JPRS]

SUB CODE: 07, 15, 20 / SUBM DATE: 190ct64 / OTH REF: 017

Card 1/1 ^{PO}

CHUDZIKIEWICZ, Ryszard; KUKULA, Tadeusz

Stack radiation recuperators for cupolas. Slevarenstvi 11 no.4:141-143 Ap '63.

1. Stetinska polytechnika, slevarenska katedra, Polsko.

KHUDZIKEVICH, R.; KUKULA, T.; KUBIN'SKI, S.

Recuperators mounted in a cupola furnace smoke stack. Lit.
proizv. no.10:20-21 0 '62. (MIRA 15:10)

(Cupola furnaces) (Heat regenerators)

KUKULA, Tadeusz; ZAJAC, Wiktor

Radioactive isotope charge level indicator adjusted to cupolas
with stack recuperators. Przegl odlew 15 no.3:82-85 Mr '65.

1. Submitted December 14, 1964.

ACC NR: AP7005591

SOURCE CODE: UR/0020/67/172/002/0403/0406

AUTHOR: Dashovskiy, M. Ya; Kukuladze, G. V.; Lazarev, V. B.; Mirgalovskaya, M. S.

ORG: Metallurgy Institute im. A. A. Baykov, Academy of Sciences, SSSR (Institut metallurgii Akademii nauk SSSR); Institute of General and Inorganic Chemistry im. N. S. Kurnakov, Academy of Sciences, SSSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Surface phenomena and crystallization processes in gallium antimonide melts

SOURCE: AN SSSR. Doklady, v. 172, no. 2, 1967, 403-406

TOPIC TAGS: surface tension, gallium compound, antimonide, crystallization

ABSTRACT: In order to determine the general applicability of the regularities characterizing the relationship between surface phenomena and crystallization processes in indium antimonide melts, the following phenomena were investigated: surface tension of melts of the gallium-antimony system, influence of zinc and tellurium on the surface tension of gallium antimonide, and influence of these admixtures on the supercooling of Ga-Sb melts and on the growth of crystals from the melts. It is suggested that the behavior of the impurities in the solvent melt can be predicted from the difference of surface tensions in the case of type $Al_{1-x}Sb_x$ antimonides. In $Al_{1-x}Sb_x$ compounds which crystallize in a zinc-blende-type lattice, a correlation exists between the mean atomic number of the compound and the surface tension at the

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UDC: 546.682*861:532.6

ACC NR: AP7005591

melting point: the higher the mean atomic number, the lower the surface tension of the compound. Data on the effect of Te on the supercooling of indium antimonide indicate that surface-active admixtures increase the probability of formation of a solid phase nucleus. At a certain concentration of Te, the growth of lamellar dendrites of gallium antimonide was hindered, causing distorted dendrites to grow, then was stopped altogether as the Te content increased further. The introduction of zinc in appreciable amounts did not interfere with the growth of lamellar dendrites of gallium antimonide. The regularities found by studying the role of surface phenomena in the crystallization of indium antimonide melts were found to apply to gallium antimonide as well, and are therefore thought to cover at least all compounds of type $AlIIBV$ which crystallize in a zinc-blende-type lattice. The paper was presented by Academician Sazhin, N. P., 4 Apr 66. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11,20/ SUBM DATE: 04Apr66/ ORIG REF: 009/ OTH REF: 001

L 39309-65 EWT(i)/EWT(m)/T/EEC(b)-2/ENF(t)/ENP(b)/ENA(c) P1-4 IJP(c)

JD/JG/GG

ACCESSION NR: AP5009364

S/0363/45/G01/002/0181/0183

AUTHOR: Kukuladze, G. V.; Mirzalyakova, M. S.

TITLE: Growth of gallium antimonide single crystals in the $\langle 111 \rangle$ polarized crystallographic direction

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 2, 1965, 181-183

TOPIC TAGS: gallium antimonide, single crystal growth, melt growth, oriented crystallization, crystallographic direction polarization, crystal semiconductor property

ABSTRACT: Gallium antimonide single crystals have been grown by the Czochralski technique in the A $\langle 111 \rangle$ or B $\langle 111 \rangle$ directions in order to study the effect of the polarity of $\langle 111 \rangle$ directions and to evaluate the relative development of A and B faces. Gallium antimonide was synthesized and single crystals were grown in a graphite crucible, in helium atmosphere, in the same hermetically sealed apparatus. Both stoichiometric and nonstoichiometric GaSb crystals were grown. Hall effect and resistivity of the crystals were measured by d-c compensation method at room or liquid nitrogen temperature. All single crystals were p-type with carrier

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L 39309-65

ACCESSION NR: AP5009364

(holes) concentration of $1.5 \times 10^{17} \text{ cm}^{-3}$ at room temperature and one order of magnitude lower at the liquid nitrogen temperature. The concentration of holes was higher in crystals with an excess of gallium and lower in crystals with an excess of antimony over the stoichiometric ratio. The polarity of the $\langle 111 \rangle$ direction had no noticeable effect on the growth of single crystals of given purity. Some GaSb single crystals were grown without continuous pulling simply by keeping the seed crystal in the melt until the crystal reached certain specified dimensions, then removing it quickly from the melt. A comparative study of the morphology of the GaSb, InSb, and Ge crystals grown by this method revealed similarity of development of the $\{111\}$ and $\{1\bar{1}\bar{1}\}$ faces between GaSb and Ge and disparity of development of the same faces between GaSb and InSb. The GaSb crystals, unlike InSb and GaAs, grew with the same facility in the B $\langle 111 \rangle$ and A $\langle 111 \rangle$ directions. The presence of an undetected acceptor impurity in the melt was suspected to be the cause of this equalization of the polarity effect. Orig. art. has: 4 figures. [JK]

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy)

EMITTED: 29Oct64

ENCL: 00

SUB CODE: ES

REF SOV: 000

OTHER: 009

ATTN PRESS: 3226

2/2 JO

KURMANOV, G.V.; MIRCALOVSKAYA, M.S.

Microhardness of $A\{111\}$ and $b\{111\}$ surfaces of gallium antimonide crystals. Izv. AN SSSR. Neorg. mat. 1 no.7:1025-1026 J1 '65.
(MIRA 18:9)

I. Institut metallurgii imeni Baykova Moskva.

KUKULADZE, M. N.

"Determination of the Oscillation Characteristics of Folded Constructions by the Method of V. Z. Vlasov." Cand Tech Sci, Georgian Polytechnic Inst, Tbilisi, 1954. (RZhMekh, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

KUKULCZANKA, Krystyna

Observations on the influence of temperature on the germination and growth of *Cocos nucifera* L. *Wiadom botan* 7 no.3/4: 233-236 '63.

KUKULCZANKA, Krystyna

Remarks on the germination of seeds of the plant family
Bromeliaceae. Wiadom botan 7 no.1:73-74 '63.

1. Ogrod Botaniczny, Uniwersytet, Wroclaw.

KUKULCZANKA, Krystyna

Morphological affinity among the needle varieties of *Callistephus chinensis* Nees. *Acta agrobot.* 15:109-125 '64.

1. Botanical Garden of the University, Wroclaw.

KUKULNICH, I.L.; RUBIN, M.A.; BAYTINA, A.Ya., kandidat tekhnicheskikh nauk, redaktor.

[Wage organization at local industrial enterprises] Organizatsiia sarabotnoi
platy na predpriyatiakh mestnoi promyshlennosti. Moskva, Gos.izd-vo mestnoi
promyshl.BSPSR, 1950. 195 p.

(MLRA 6:11)

(Wages) (Industry)

1ST AND 2ND SUBJECTS										3RD AND 4TH SUBJECTS									
PROCESSES AND PROPERTIES INDEX																			
<div>H</div> <div>MAGYAR TECHNIKA — HUNGARIAN ENGINEERING</div> <div>1950</div> <div>No. 9, Sept.</div> <div>36</div> <div>I. I. Kinkulovich and M. A. Rubin: 331.222</div> <div>Planning and analysing work indexes.</div> <div>VIII. pp. 11-15</div>																			
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<div style="display: flex; justify-content: space-between;"> 74 36 </div> <p> Magyar Technika Hungarian Engineering 1950 no.11-12 nov.-dec. </p> <p> <i>I. I. Kuznetsov</i> <i>and M. A. Ruban:</i> Planning and analyzing work index num- bers (from the Russian) </p>																																																			
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KUKULEVICH, I.L.: LYUDVIG, A.A.; SHABARIN, A.K., redaktor; GIMPEL'SON, A.Z.,
redaktor; LYUDKOVSKAYA, N.I., tekhnicheskiiy redaktor

[The organization of wages in enterprises furnishing local building materials] Organizatsiia zarabotnoi platy na prdprilatiakh mestnykh stroitel'nykh materialov. Pod red. A.K.Shabarina. Moskva, Gos. izd-vo lit-ry po stroit. materialam, 1956. 229 p. (MLRA 9:8)
(Building materials industry) (Wages)

KUKULEVICH, Izrail' Leybovich; MACHIKHIN, Viktor Pavlovich;
BAYTIN, A.I., red.; BOBYLEVA, L.V., red.; GERASIMOVA, Ye.S.,
tekhn.red.

[The wage systems in enterprises of local industry] Organizatsiia
zarabotnoi platy na predpriatiakh mestnoi promyshlennosti. Moskva,
Gos.izd-vo planovo-ekonomicheskoi lit-ry, 1961. 355 p.
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